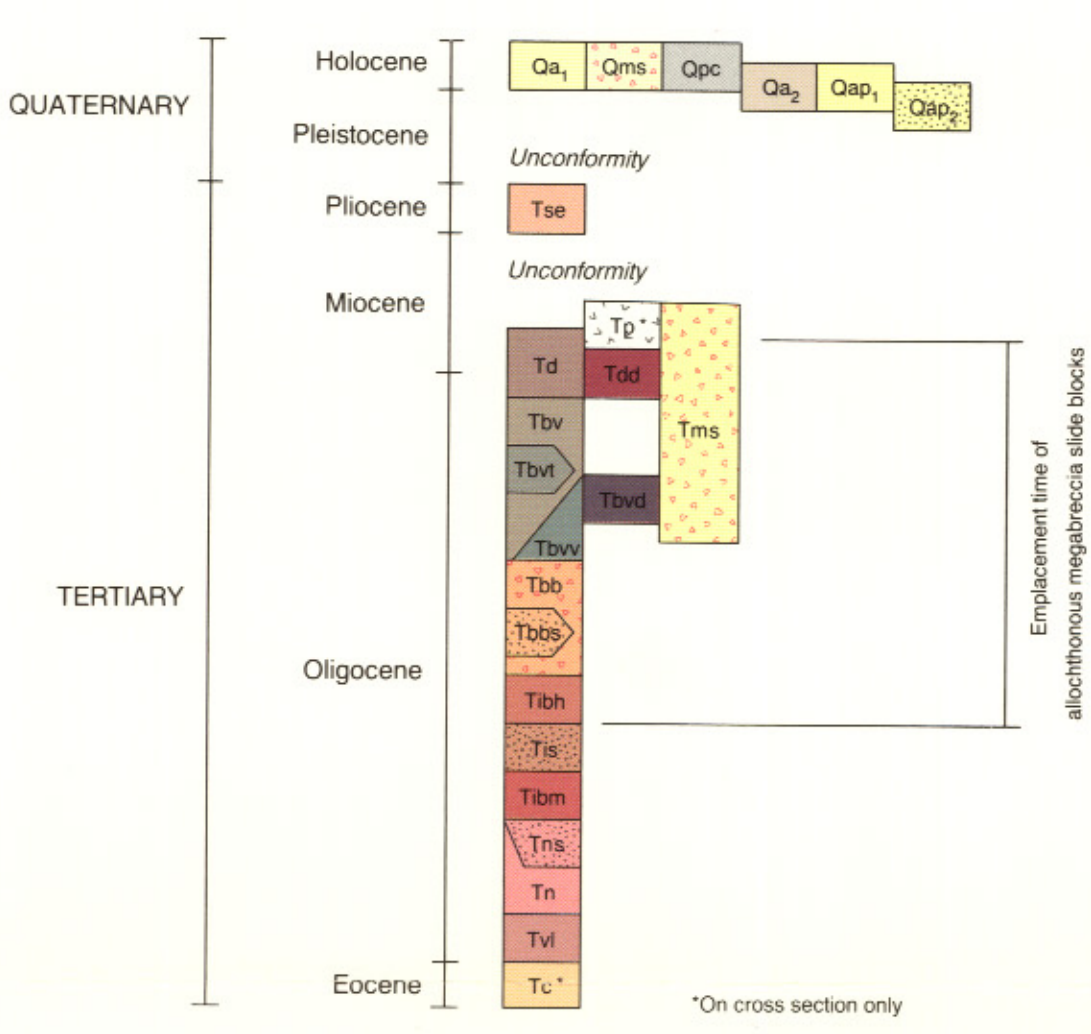


by  
John J. Anderson, Thomas A. Iivari, and Peter D. Rowley  
U.S. Geological Survey

1987



CORRELATION OF MAP UNITS



SYSTEM	SERIES	STRATIGRAPHIC UNIT	SYMBOL	Thickness in Feet (Meters)	LITHOLOGY
QUATERNARY	Holocene	Surficial deposits	Qa <sub>1</sub> /Qms/Qpc/Qa <sub>2</sub> /Qap <sub>1</sub> /Qap <sub>2</sub>	0-100 (0-30)	
	Pleistocene	Sevier River Fm.	Tse	0-10* (0-3*)	
TERTIARY	Pliocene	★ Mt. Dutton Formation	Td	1000+ (300+)	
		• Feeder dikes	Tdd		
	Miocene	Bear Valley Formation	Tbv	500-1000 (150-300)	
		• Welded tuff unit	Tbvt	0-30 (0-10)	
		• Feeder dikes	Tbvd		
		• Volcanic vent	Tbv		
	Eocene	Buckskin Breccia	Tbb	0-750 (0-230)	
		• Local sandstone unit	Tbbs	0-100 (0-30)	
		Isom Formation	Tibh	30-250 (9-75)	
		• Baldhills Tuff Mbr.	Tis		
		• Sandstone member	Tibm		
		Wah Wah Springs Fm.	Tn/Tns	30-100 (10-30)	
		• Local sandstone mbr.			
		Local volcanic and sedimentary strata	Tvl	0-250 (0-75)	
		Claron Formation (Cross-section)	Tc		

\* Emplacement time of plutonic rock (Tp on cross-section)

DESCRIPTION OF MAP UNITS

Qa <sub>1</sub>	Alluvium—Unconsolidated silt, sand, and gravel along active streams and washes.	Tbvd	Feeder dikes of Bear Valley Formation—Dark-gray to black, vesicular basalt(?)
Qms	Landslide debris—Disaggregated rock and surficial deposits.	Tbv	Volcanic vent of Bear Valley Formation—Dark-gray basaltic(?) lava and mudflow-breccia.
Qpc	Playa lake deposits—Lacustrine clay, silt, and sand in undrained depression.	Tbb	Buckskin Breccia—Light-colored, well-bedded, moderately resistant, lithic ash-flow tuff.
Qa <sub>2</sub>	Older alluvium—Dissected deposits of unconsolidated silt, sand, and gravel along active streams and washes.	Tbbs	Local sandstone unit of Buckskin Breccia—Light- to medium-gray and yellowish, weak, zeolite-cemented, cross-bedded, tuffaceous sandstone.
Qap <sub>1</sub>	Piedmont-slope deposits—Unconsolidated, poorly sorted silt, sand, and gravel occurring on broad, sloping surfaces (piedmont slopes) formed by deposition (as alluvial fans) and by erosion (as pediments).	Tibh	Baldhills Tuff Member of Isom Formation—Pale- to grayish-red and reddish-purplish-gray, ledge-forming, densely welded, vitric-crystal ash-flow tuff.
Qap <sub>2</sub>	Older piedmont-slope deposits—Poorly indurated, poorly sorted silt, sand, and gravel mantling erosional remnants of pediments that formed graded to the Sevier River as much as 300 feet (90 m) above present drainage levels.	Tis	Sandstone member of Isom Formation—Light- to medium-gray and yellowish, weak, cross-bedded, zeolite-cemented, tuffaceous sandstone.
Tse	Sevier River Formation—Light-gray, light-brown, and pinkish, poorly to moderately consolidated silt, pebbly sandstone, and conglomerate deposited in the valleys of the Sevier River and its tributaries.	Tibm	Blue Meadows Tuff Member of Isom Formation—Pale- to grayish-red and reddish-gray, ledge-forming, densely welded vitric and vitric-crystal ash-flow tuff.
Tms	Gravity slide megabreccia—Large blocks of heterogeneous rock in a chaotic assemblage formed by gravity slides.	Tn	Needles Range Group—Only the Wah Wah Springs Formation appears in outcrop. Reddish-brown to salmon-pink, ledge-forming, moderately welded vitric-crystal ash-flow tuff.
Td	Mount Dutton Formation—Gray and brown, volcanic mudflow-breccia of intermediate composition and subordinate conglomerate, tuffaceous sandstone, and lava of intermediate and mafic composition.	Tns	Sandstone member of Wah Wah Springs Formation—Light- to medium gray, weak, zeolite-cemented tuffaceous sandstone and subordinate conglomerate.
Tdd	Feeder dikes of Mount Dutton Formation—Medium-gray, hornblende-bearing andesite.	Tvl	Local volcanic and sedimentary strata—Local accumulations of lava, tuff, volcanic mudflow-breccia, and tuffaceous sedimentary strata.
Tbv	Bear Valley Formation—Pale- to dark-gray, yellowish, and greenish-gray, weak, crossbedded, zeolite-cemented, tuffaceous sandstone and subordinate felsic tuff and basaltic(?) lava and volcanic mudflow-breccia.	Tc	Claron Formation—Reddish-brown and grayish-white, well-bedded, calcareous shale and siltstone, argillaceous freshwater limestone, sandstone, and conglomerate.
Tbvt	Welded tuff unit of Bear Valley Formation—Brick-red to maroon, densely welded, vitric ash-flow tuff.		

MAP SYMBOLS

